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Obstacles to modern contraception use in Penka-Michel Health District, Western Region of Cameroon

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Abbreviations

CMs: Contraceptive Methods

FP: Familial Planning

IUDs: Intrauterine Devices

MC: Modern Contraception

NIS: National Institute of Statistics

SRN: State Registered Nurses

SSA: Sub-Saharan Africa

USAID: United States Agency for International Development

Keywords: Obstacles, modern contraception, family planning, contraceptive prevalence, financial support, Penka-Michel.

Abstract:

Introduction: In Cameroon, the numbers of births as well as that of maternal mortalities are constantly changing, as a result of high fertility and low use of modern contraception (MC).

Purpose of research: The study aims to identify the obstacles to MC use in Penka-Michel Health District. **Results:** 331 women, 112 men and 42 health workers were surveyed. Modern contraceptive prevalence among women was about 24%. The major barriers they perceived included lack of information, desire to conceive, fear of side effects, misunderstanding of breastfeeding, and spousal opposition. For men, these barriers included the desire to have many children, fear of side effects, and infidelity of the woman. There are also some socio-cultural and religious parameters, inadequate provision of care in family planning, poor delivery of available resources and lack of financial resources. Age (OR=3.4; P=0.03), educational attainment (OR=2.4; P=0.006) and spouse (OR=5.6; P<0.0001) had a statistically significant influence on the use of MC by women. In men, the influence is marked by age (OR=3; P=0.02) and marital status (OR=11; P<0.0001). **Conclusions:** The increase in contraceptive prevalence is possible only through awareness and training on the indicated methods as well as the financial support of the spouse to optimize the use of MC in Penka-Michel Health District.

1. Introduction

Family Planning (FP) is a set of methods enabling populations to have the desired number of children and determine birth spacing through the use of CMs [1]. There are various CMs [2]. Their effective use helps, firstly, to reduce maternal and infant mortality and the number of unwanted pregnancies, and secondly, to prevent HIV/AIDS and enhance the education of children and adolescents [3, 4]. It also serves to promote national and regional economic development [5]. In 2019, out of 1.9 billion women of reproductive age worldwide, 1.1 billion desired to use CMs [6]. This increased need is a direct consequence of the considerable progress observed globally regarding the use of MC.

Unfortunately, SSA continues to record the lowest figures for the use of MC [7] because of numerous resistance factors faced in safe maternity actions [8]. Consequently, a lot of human lives have been lost, primarily pregnant women and children. Moreover, a close link has been established between unmet FP needs, unwanted pregnancies, and poorly conducted abortions.

Thus, 46 million abortions are performed worldwide, particularly in SSA, each year, resulting in almost 68,000 (13%) deaths per year [9]. Yet, according to the USAID, up to 30% of the 287,000 maternal deaths and 1.6 million child deaths occurring worldwide each year could be prevented through FP [10]. FP is a key component in reducing maternal and child mortality [8 ,11].

Between 1976 and 2010, the population of Cameroon increased from 7 million to 19 million inhabitants. This figure could double by 2037 if birth control measures are not taken [10]. In anticipation of this growth, the Cameroonian government adopted a national reproductive health policy in 2001. It also aligns with the Millennium Development Goals, particularly target seven of goal three, aiming to ensure access for all to sexual and reproductive healthcare services, including family planning [12]. Subsequently, the Cameroonian government established the 2001-2015 health sector strategy emphasizing the implementation of MC methods [13].

Despite the various efforts of the government to increase FP practices, especially in rural areas, the percentage of MC method use remains very low (9%), as indicated by the results of the Demographic and Health Survey [14, 15]. This has led to a significant frequency of infant deaths across the national territory. This low rate of MC method use, on one hand, the lack of comprehensive documentation as the reasons for community apprehension regarding the implementation of FP, particularly in the Western Region of Cameroon, on the other hand, constitute our motivation for conducting the present study.

The article consists of five parts. The second addresses the materials and methods used to carry out this study. The third part presents various results obtained and their interpretation. The fourth part discusses the results obtained above. The study ends in its fifth part with a conclusion presenting some recommendations to optimize the use of MC in the Penka-Michel Health District.

2. Materials and Methods

2.1. Study Type

This research represents a two-fold descriptive cross-sectional study: qualitative and quantitative. We integrated case-control analysis for the investigation of determinants for non-use of MC among women and men.

2.2. Study Location and Duration

The study was conducted in the Penka-Michel Health District, West Region of Cameroon, from June to December 2022. Penka-Michel is one of the five Districts in the Menoua Division. It covers an area of 276 km² with an estimated population of 73,526 inhabitants [11], unevenly distributed among four groupings (Bansoa: 22%; Bamendou: 35%; Balessing: 25%, and Baloum: 9%) and the urban center (6%).

2.3. Study Population

The study population consisted of women of reproductive age, married men, and healthcare personnel from the 25 healthcare facilities in the Penka-Michel Health District. The participation or non-participation of a resident of the Penka-Michel Health District was based on:

- **Inclusion Criteria:**
 - Women of reproductive age,
 - Married men,
 - Healthcare personnel who provided verbal consent.
- **Exclusion Criteria:**
 - Young girls and women not yet of reproductive age or unable to reproduce,
 - Unmarried men,
 - Healthcare personnel absent from their workplace,
 - Unavailable healthcare personnel.

2.4. Sampling Techniques

Table 1 shows the sampling method used for each individual in the target population. The number of women to be interviewed in each health area was deduced proportionally to the total population of the respective area (Table 2).

2.5. Data Analysis

A 5% precision was used. Contraceptive prevalence was calculated by estimating the frequencies of use for each CM. Proportions were calculated for the perceived reasons for non-use of MC

among men and women. Nested case-control analysis was conducted, and the influence of age, level of education, regime, and marital status on non-use of contraceptives was determined by calculating the odds ratio and P-value. Fisher's test was performed for comparisons between variables. To control confounding factors between these variables, a multivariate analysis was conducted using the Epi Info version 3.5 software, and graphs were created in Excel version 2013. Opinions recorded in the focus group were transcribed manually.

2.6. Ethical Clearance

This study was conducted following fundamental principles of medical research, namely:

- Research and respect for human dignity,
- Confidentiality of collected data,
- Respect for verbal consent,
- Respect for privacy.

3. Results

3.1 Description of the Study Population

The study sample comprised 338 women of reproductive age, 112 married men, and 42 healthcare workers from the 25 healthcare facilities in Penka-Michel Health District. The sociodemographic data of the surveyed population are summarized in Table 3, where the symbol \neq indicates variables expressed as mean with standard deviation. The participation rate of women in the study was 98% (331 women out of 338). Table 3 shows that the mean age within the population of women of reproductive age is 32 ± 8 years. It represents a young population, with the majority falling in the 30-39 age group (37%). There was a slight difference between primary education levels 156 (47.1%) and secondary education levels 172 (51.9%). The most represented occupation was homemakers 107 (32%). The average number of children and their deaths per woman was 3.7 and 1.3, respectively. Table 4 indicates that 97% of all women were aware of at least one CM among condoms, injectables, IUDs, pills, and implants. The use of male condoms was the most recognized CM 295 (89.1%). The most represented sources of information were schools 161 (48.7%) and healthcare facilities 110 (33.3%). For the surveyed married men, the mean age was 46 years, and the average number of children each man had responsibility for was 8.8. Farmers were the majority 32 (31.3%), followed by traders 29 (28.43%). There was a

slight difference between polygamous and monogamous marital regimes. Regarding the level of education, secondary education 55 (53.9%) and primary education 40 (39.2%) were the most represented, respectively.

However, the mean age of healthcare workers was 38 ± 10 years. There were 19 (45%) women and 23 (55%) men. The professional seniority was 13 ± 9.5 years, and among healthcare workers trained in FP [6], the training years varied between 2012 [3] and 2013 [7]. Among the 42 healthcare workers surveyed, SRN were the most represented with a total of 19 (45.2%). Concerning their current activities, 37 (88.2%) did not have specific activities at the time of the survey, 3 (7.1%) worked in the FP service, and 2 (4.7%) in the delivery service.

3.2 Contraceptive Practice

At the time of the study, 125 (37.7%) women [85 (34.4%) married and 37 (41%) unmarried] used a CM among modern 80 (24.1%), natural 30 (8.9%), and mixed 15 (4.6%) methods. The most used modern methods were male condoms (19.4%) and injectables (2.2%). Among the 34.4% of married women using a CM, 14.6% used the modern method, 14.2% the natural method, and 5.6% the mixed method. Unmarried women mainly used male condoms 28 (31%), while among married women, there was a more balanced distribution between natural and modern methods.

3.3 Obstacles to the Use of Modern Contraception

Obstacles related to the use of MC were observed among both women and men. In the former, there were obstacles related to women themselves and those unrelated to them. Obstacles related to women included lack of information to make a method choice 60 (18.1%), the desire to conceive 56 (16.9%), and fear of side effects 48 (14.5%). The major obstacle unrelated to women was primarily the opposition of the spouse 14 (4.2%). 142 (56.8%) of the spouses of the interviewed women were against MC, 39 (25.8%) reported having used or intended to use it without their husbands' knowledge, and 34 (22.5%) completely refused to use MC because of their spouse's refusal. Overall, the study showed a dissatisfaction rate in FP among 116 (35%) women. In the later, 71 (69.6%) were against MC. Reasons cited for this refusal included the desire to have multiple children 58 (56.8%), fear of delayed or absent return of fertility after method removal, and fear of female infidelity.

3.4 Focus Group Discussion

Regarding the group exchange, data analysis showed that 8 (80%) of the surveyed men had already heard about FP, and 5 (50%) were against MC.

3.5 Determinants of Non-use of Modern Contraception

Several parameters that could influence the use of MC were tested among both women and men. Table 5 highlights the determinants tested. Table 6 presents the bivariate analysis and multivariate regression of factors associated with non-use of MC. Overall, there is a statistically significant link between non-use of MC and being married, level of education, age, opposition of the spouse, and lack of communication within the couple about MC (P-Value<5%). Among men, there is a statistically significant relationship between refusal to use MC and polygamy and age.

4. Discussions

Our study involved 331 women of reproductive age with a mean age of 32 ± 8 years. The majority fell within the 30-39 age group, and most were married (72%). Similar results were found by [15, 16]. Such similarities can be explained by the fact that the target populations were identical, and all studies were conducted in fairly similar contexts. Of the 102 married men in our study, the mean age was 46 years, and the majority age group (32%) was 50-59 years. There was no significant difference in marital regimes between polygamists (51%) and monogamists (48%). The authors of Ref.[17] found a somewhat different result in a survey of 402 married men, with a majority age group (66%) of 40-50 years, and only 84.5% monogamists and 15.5% polygamists. This difference could be due to many young men from Penka-Michel migrating to larger cities, leaving an aging population in the village. Additionally, in our context, men feel honored when they have multiple wives.

38% of women used a contraceptive method among modern (24.1%), natural (8.9%), and mixed (4.6%) methods. There were significant differences not only within age groups but especially within marital status. Contraceptive prevalence among married women was 34% and 41% otherwise. Similar studies have reported widely variable contraceptive prevalences ranging from 2.5% to 67%. Doctor et al. [18] found 2.5% in a rural area of Nigeria among women of reproductive age, with 1.3% for each method group. Decker and Constantine [15] in Angola

among married women found a prevalence of 5.4% [pills (2.9%), calendar (1.7%), injectables (1.3%), and male condom (0.5%)]. Teye [19] estimated a MC prevalence of 16% [Injectables (5.4%), pills (4.6%), male condom (4.1%), implants (1.1%)] in Ghana. In Cameroon, Minsante [20] obtained a rural prevalence of 14%, including 32% in the West Cameroon among married women. Mathe et al. [21] found a prevalence of 30.6%, with 11.8% for modern methods [male condom (6.2%), pills (3.1%), injectables (1%)] and 21.6% for natural methods [calendar (18.7%), withdrawal (2.6%)] in the Democratic Republic of Congo. Much higher figures have been recorded by [15, 22-24]. This difference can be explained by the differences in sociodemographic and cultural factors of the surveyed women of reproductive age, their place of residence, the data collection location, and the availability of FP services by healthcare services.

Various reasons were found among women in our study regarding the non-use of MC in the Penka-Michel Health District. These include lack of information to choose a method (18%), desire to conceive (16.9%), fear of side effects (14.5%), misconceptions about sexual intercourse during breastfeeding (8.4%), and spouse opposition (4.2%). Similar observations were made by [15,16,19,21,25,26]. The lack of information to choose a method can be explained firstly by the fact that very few women are aware of modern methods. While 98% were aware of at least one CM, focusing on modern methods specifically, 89% of women were aware of male condoms, 23.8% of pills, 21.7% of injectables, 12.6% of implants, 6.3% of IUDs, 3% of female condoms, and 2.1% of tubal ligation. Mathe et al. [21] found the same results. Moreover, FP activities have only recently intensified in the Penka-Michel District, and women are only sensitized during vaccinations and antenatal care visits.

The desire to conceive is a significant obstacle to the use of MC. This is primarily because, in Penka-Michel, as elsewhere in Africa, a child is considered wealth. Additionally, in polygamous households, there is competition among women regarding the number of children to benefit more from the husband's inheritance if he dies. During the survey, some women indicated wanting to wait just two years and conceive again. Many fear using MC for fear of not being able to conceive at the right time. Fear of side effects is not insignificant among obstacles to the use of MC. Among all women, 211 (63.7%) acknowledged that modern methods are the most effective, but 265 (80%) thought that these same methods are the most dangerous to health. They highlighted weight gain, abundant bleeding, irregular cycles, and the delay in regaining fertility. Breastfeeding women are not interested in contraception because this period is like a resting

period for them, for a variable duration of a few months to two years. As a consequence, there is spousal infidelity and, by extension, exposure to numerous diseases such as STIs/AIDS. This justifies the fact that some surveyed married men would encourage polygamy.

Up to 22.5% of women declared not using MC due to their spouse's opposition. The main reason for this refusal is birth limitation [17,27,28]. In Nigeria, Ijadulona et al. [17] obtained similar results. In their study of 402 surveyed married men, about 48% did not use a CM for various reasons: religious beliefs (44%), fear of side effects (30.5%), and fear of female infidelity (20%). In Pakistan, D'Souza [29] showed that out of 502 surveyed married men, 347 (70%) were against FP. In the field, we observed a lack of trained FP personnel, unavailability, and frequent contraceptive stockouts. Many authors such as [22, 30-32] found these factors to be hindrances to FP programs. Furthermore, public facilities were more involved in FP services. Unavailabilities and stockouts were more frequent in private facilities. This observation was made in Tanzania in 2012 [33]. Decker et al. [15] also mentioned the lack of financial means as one of the hinderances.

Five out of ten men thought that family planning refers only to birth limitation. For several men, MC appears to be a means of not achieving their goal of having several children. This aligns with the observations of [29] and [34]. For men receptive to MC, certain side effects such as the considerable delay in regaining fertility would discourage them. Also, like women, a significant number of men believe that MC is the source of many diseases. The fear of female infidelity when she uses MC is a real problem for men. Up to 20% among them alluded to this hypothesis. Such divergences of viewpoints regarding MC among men are the direct consequence of inadequate information about MC, and this also indicate fragility in family planning management within the couple.

For women, bivariate analysis showed that factors associated with non-use of MC include marriage (OR=3; $P<0.0001$), level of education (OR=4; $P<0.0001$), age (OR=7.6; $P<0.001$), spousal opposition (OR=6; $P<0.0001$), and lack of communication between the couple about contraception (OR=2.8; $P<0.0001$). As for multivariate logistic regression, it is the level of education (OR=2.4; $P=0.006$), age (OR=3.4; $P=0.03$), and spousal opposition (OR=5.6; $P<0.0001$) that are highlighted. The authors of Refs.[15,19,23,35] have mentioned the same determinants. Among men, the factors associated with the refusal of MC include the polygamous regime (OR=11; $P<0.0001$) and age (OR=10.3; $P=0.02$). In Nigeria, Duze et al. [34] obtained the

same results. The statistically significant relationship between non-use of MC and polygamy can be explained by the fact that men generally engage in it to have a large family. Consequently, they may not be open to MC, which therefore appears as a hindrance to their ambition. This is also valid for men under 40 who oppose contraception because they have not given birth to the desired number of children, thus fearing not being able to have more after using MC.

5. Conclusion

The aim of this study was to identify obstacles to the use of MC in the Penka-Michel Health District, West Region of Cameroon. Based on a descriptive cross-sectional study of data collected from June to December 2022 involving 338 women, 112 men, and 42 healthcare personnel, the study revealed that the prevalence of modern contraceptive use among women was approximately 24%. Major perceived obstacles among women included lack of information, desire to conceive, fear of side effects, misunderstanding of breastfeeding, and spousal opposition. Perceived obstacles among men comprised the desire to have many children, fear of side effects, and concerns about female infidelity. Age (OR=3.4; P=0.03), education level (OR=2.4; P=0.006), and spousal influence (OR=5.6; P<0.0001) significantly influenced the use of MC by women. However, among men, non-use of MC was statistically influenced by age (OR=3; P=0.02) and marital status (OR=11; P<0.0001). Overall, the Penka-Michel District demonstrates low awareness and a lack of training in modern contraceptive methods. Moreover, very few healthcare personnel had adequate knowledge of MC. In summary, the results of this study advocate for strengthening the capacity for using MC through ongoing training, raising awareness about its importance, and providing necessary family planning resources to the population.

Tables

Table 1. Sampling Method for Each Individual in the Target Population

	Sampling framework	Sampling method	Number planned	Number obtained
Health area	13	Exhaustive	13	/
Villages/Neighborhoods	221	Simple random sampling without replacement of 2 to 3 villages per health area.	32	32
Women	-	Stratified sampling by health area.	311	338

Men	-	Consecutive sampling within the selected villages for interviewing women.	-	102
Focus group discussion	Banéghang village	Convenience sampling: selection based on the level of education, profession, and marital status.	10	10
Healthcare personnel	Personnel from the 25 health facilities	Convenience sampling: selection based on the current service (family planning, delivery, or any other service).	-	42

Table 2. Breakdown of the number of women according to villages and health areas

Health areas	Villages	Number of women
Banéghang	Bakassa, Banéghang, Bassossia	50
Bamendou 2	Makia, Ngui, Melah	26
Bamendouléo	Zinto, Zemla	15
Badjeghang	Badjeghang 1 and 2	8
Bani-baloum	Tsila, Meka	6
Baloum	Tsimela, lafeu	14
Bambi	Batoubi 1 and 2	14
Bansoa chefferie	Djullah 1 and 2, King place	26
Balefok	Tsaa, Gouet	13
Batotcha	Banang, Batotcha	15
Balessing	Batouletsi, Balepipi, Bawonwa	40
Total	32	338

Table 3. Sociodemographic characteristics of the surveyed women

Sociodemographic characteristic		Total number (%)	95% Confidence interval
Age Group	15-19	27(9)	6-12,9
	20-29	86(28,8)	23,7-34,3
	30-39	109(36,5)	31-42,2
	40-49	77(25,8)	20,9-31,1
Level of Education	Primary	156(47,1)	41,6-52,6
	Secondary	172(51,9)	46,4-57,4
	University	3(1,0)	0,2-2,9
Matrimonial Regime	Polygamy	138(57,3)	50,8-63,6
	Monogamy	103(42,7)	36,4-49,2
Marital Status	Married	248(74,9)	69,9-79,5
	Single	83(23,1)	20,6-30,2

Profession	Homemaker	107(32,3)	27,3-37,7
	Farmer	89(26,8)	22,6-32,0
	Merchant	52(15,7)	12,0-20,0
	Students	41(12,3)	9,1-16,5
	Civil servant	4(1,2)	0,3-3,2
	Others	38(11,4)	8,3-15,5
Number of Children	< 4	157(46)	39,8-50,8
	≥ 4	181(54)	49,1-60,1
Gravidity	<5	151(45,6)	40,1-51,1
	≥5	180(54,3)	48,8-59,8
Unwanted pregnancies (average) ≠		0,8	0,3- 2,5
Child Death (average) ≠		1,3	0,65-1,9
Age of death (average in years) ≠		2,6	1,5-3,7

Table 4. Knowledge of contraceptive methods among surveyed women.

Methods	Total Number (%)	95% Confidence Interval
Male Condom	295(89,1)	85,1-92,1
Calendar method	184(55,5)	50-60,9
Abstinence	89(26,8)	22,6-32
Pills	79(23,8)	19,4-28,9
Injectables	72 (21,7)	17,5-26,6
Withdrawal	48(14,5)	10,9-18,8
Implants	42(12,6)	9,3-16,8
Female Condom	10(3,02)	0,02-1,9
LAM (Lactational Amenorrhea Method)	6 (1,8)	0,74-4,1
Intrauterine device (IUD)	3 (0,9)	0,23-2,85
Diaphragm	1 (0,3)	0,02- 1,94

Table 5. Distribution of Determinants of Non-Use of Modern Contraception Tested in Men and Women

Determinants Tested		Frequencies (%)		OR*(CI** 95%)	P-Value
		CAS (%)	TEMOINS(%)		
Women					
Marital Status	Single	/	/	/	/
	Married	167(50,4)	39(11,7)	3,0(1,7-5,1)	<0,0001
Level of Education	Primary	115(35)	66(20)	4,0(2,2-7,1)	<0,0001
	Secondary	/	/	/	/
	University	/	/	/	/
Matrimonial regime	Polygamy	94(28,3)	24(7,2)	Réf	1
	Monogamy	73(22)	24(7,2)	0,8(0,4-1,6)	0,36
Age (years)	< 20	09(3)	18(5,4)	Réf	1
	20- 29	27(8,1)	9(3)	4,3(1,7-10,9)	0,001
	30-39	24(7,2)	9(3)	7,0(2,8-17,7)	<0,0001
	40-49	16(4,8)	9(3)	7,6(2,8-20,1)	<0,0001
Number of Children <3		89(27)	33(10)	0,4(0,2-0,7)	0,001
Spouse Opposition		108(32,6)	35(10,5)	6,0(2,8-12,7)	<0,0001
Lack of communication between the couple regarding contraception		135(41)	53(16)	2,8(1,6-4,7)	<0,0001
Men					
Matrimonial Regime	Polygamy	44(43)	22(21,5)	3,9(1,6-9,9)	0,003
	Monogamy	/	/	/	/
Level of Education	Primary	33(32)	20(19,6)	1,5(0,6-3,7)	0,3
	Secondary	/	/	/	/
	University	/	/	/	/
Age<40 years		31(30)	25(24,5)	3,2(1,1-8,8)	0,01
Children<8		39(32)	9(8,8)	0,4(0,2-1,2)	0,09
*Or= odds ratio **CI= Confidence Interval Ref= Reference for comparison					

Conflict of Interest

The authors declare no conflicts of interest in this study.

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